

What is claimed is:

1. Electroluminescent phosphor comprising:

a host material which can be represented by the formula $\text{ZnS} \cdot a\text{AO}$, wherein "A" is at least one element selected from among magnesium (Mg), calcium (Ca), strontium (Sr), and barium (Ba), and "a" ranges from 0.001 to 0.01;

either one of or both copper (Cu) or manganese (Mn) as an activator; and

at least one element selected from among chlorine (Cl), bromine (Br), iodine (I), and aluminum (Al) as a co-activator.

2. An electroluminescent phosphor production method comprising:

a primary firing process for firing at a temperature in the range of 1150 to 1350 °C a mixture produced by adding to zinc sulfide (ZnS):

at least one kind of compounds selected from among copper compounds and manganese compounds as a material of an activator,

at least one kind of compounds selected from among halides and aluminum compounds as a material of a co-activator,

at least one kind of compounds selected from among alkaline earth metal oxides and compounds that change into alkaline earth metal oxides when fired, and

a halide or halides serving as a crystal growing agent;

an intermediate manufacturing process for producing an intermediate by washing, filtrating, and drying a fired substance resulting from the primary firing process;

a secondary firing process for crystal transformation of a part of the intermediate produced from the intermediate manufacturing process; and

an etching process for etching the intermediate fired by the secondary firing process.

3. An electroluminescent phosphor production method as claimed in claim 2, wherein:

magnesium oxide (MgO) is used as an alkaline earth metal oxide, and

at least one of the compounds selected from among magnesium carbonate (MgCO_3), basic magnesium carbonate, calcium carbonate (CaCO_3), calcium hydroxide (Ca(OH)_2), strontium carbonate (SrCO_3), strontium nitrate ($\text{Sr(NO}_3)_2$), barium carbonate (BaCO_3), and barium oxalate (BaC_2O_4) is used as a compound that changes into an alkaline earth metal oxide when fired.